CLAIMS:

1. A vibration damping rubber member having an island-sea structure in which fine particles of a vulcanized rubber material B which enables the vibration damping rubber member to have a high vibration damping effect are dispersed as a dispersed phase in a matrix phase of a vulcanized rubber material A that enables the vibration damping rubber member to exhibit a low degree of dynamic spring stiffness, characterized in that:

said vulcanized rubber material B functioning as said dispersed phase is formed by vulcanizing an unvulcanized mass of the rubber material B while said unvulcanized mass of the rubber material B is evenly mixed with and dispersed in an unvulcanized mass of the rubber material A, and said unvulcanized mass of the rubber material A is vulcanized while said vulcanized rubber material B is dispersed in said unvulcanized mass of said rubber material A.

2. A vibration damping rubber member according to claim 1, wherein said vulcanized rubber material B consists of fine particles which have an average size of 0.1-100μm and which are dispersed in said vulcanized rubber material A.

3. A vibration damping rubber member according to claim 1 or 2, wherein said rubber material A consists of NR, or a mixture of NR and BR or SBR, and said rubber material B consists of halogenated IIR, maleicacid-modified EPM, CR,

carboxyl-modified NBR, CSM, CPE, FR or acrylic rubber.

4. A vibration damping rubber member having an island-sea structure in which fine particles of a vulcanized rubber material B which enables the vibration damping rubber member to have a high vibration damping effect are dispersed as a dispersed phase in a matrix phase of a vulcanized rubber material A that enables the vibration damping rubber member to exhibit a low degree of dynamic spring stiffness, characterized in that:

said rubber material A is a natural rubber, while said rubber material B is an acrylic rubber, and said rubber materials A and B are mixed together in a proportion of 90/10-60/40 by weight; and

said vulcanized rubber material B functioning as said dispersed phase is formed as fine particles having a size of 0.1-100μm, by vulcanizing an unvulcanized mass of the rubber material B while said unvulcanized mass of the rubber material B is evenly mixed with and dispersed in an unvulcanized mass of the rubber material A, and said unvulcanized mass of the rubber material A is vulcanized while said vulcanized rubber material B is dispersed in said unvulcanized mass of said rubber material A.

5. A process of producing a vibration damping rubber member, characterized by: evenly mixing together an unvulcanized rubber material A which enables the vibration damping rubber member to exhibit a low degree of dynamic spring stiffness, an unvulcanized rubber material B which enables the vibration

damping rubber member to have a high vibration damping effect, and a vulcanizing agent capable of vulcanizing only said unvulcanized rubber material B; heating a mixture of said unvulcanized rubber materials A and B and said vulcanizing agent, to vulcanize said unvulcanized rubber material B such that fine particles of the vulcanized rubber material B are dispersed in said unvulcanized rubber material A; adding to said mixture a vulcanizing agent capable of vulcanizing said unvulcanized rubber material A; and forming a thus obtained mixture into a desired shape, and heating the formed mixture to vulcanize said unvulcanized rubber material A, for obtaining said vibration damping rubber member having an island-sea structure in which fine particles of the vulcanized rubber material B are dispersed as a dispersed phase in a matrix phase of the vulcanized rubber material A.

6. A process according to claim 5, wherein said unvulcanized rubber material A is evenly mixed with the rubber material B to which said vulcanizing agent capable of vulcanizing only said unvulcanized rubber material has been mixed with said unvulcanized rubber material.

7. A process according to claim 5 or 6, wherein said unvulcanized rubber material A is vulcanized by a sulfur-based vulcanizing system, while said unvulcanized rubber material B is vulcanized by a resin-based vulcanizing system, a metal-oxide-based vulcanizing system or an amine-based

vulcanizing system.

8. A process of producing a vibration damping rubber member having a desired shape, and a low degree of dynamic/static ratio of spring constant and a high vibration damping effect, by vulcanizing and forming a rubber composition which includes a diene-based rubber material as a rubber component and which enables the vulcanized and formed rubber composition to have a loss factor tanδ of at least 0.1, characterized in that:

a portion of said diene-based rubber material is replaced by not greater than 40% by weight of a rubber material of functional group-vulcanization type per 100% by weight of a total amount of these two rubber materials, and said two rubber materials and a vulcanizing agent capable of vulcanizing only said rubber material of functional group-vulcanization type are evenly mixed together to form a mixture, which is heated to vulcanize said rubber material such that fine particles of the vulcanized rubber material of functional group-vulcanization type are dispersed in said diene-based rubber material, and wherein a vulcanizing agent capable of vulcanizing said diene-based rubber material A is added to said mixture, and a thus obtained mixture is formed into a desired shape and heated to vulcanize said diene-based rubber material A, for obtaining said vibration damping rubber member such that the vibration damping rubber member has an island-sea structure in which fine particles of said rubber material of functional group-vulcanization type are dispersed as a dispersed phase in a

matrix phase of said diene-based rubber material and which has said low degree of dynamic/static ratio of spring constant.

9. A process according to claim 8, wherein said rubber material of functional group-vulcanization type is halogenated IIR.

10. A process according to claim 8 or 9, wherein said vulcanized rubber material of functional group-vulcanization type is dispersed in the form of fine particles having an average size of 0.1-100μm in said vulcanized diene-based rubber material.

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